

SECTION 200

1. REMOVAL OF UNSUITABLE MATERIAL:  
SOIL BORINGS HAVE IDENTIFIED MATERIAL, DESCRIBED AS (insert description), THAT (IS or MAY BE) UNSUITABLE FOR BEARING OF THE STRUCTURE AT ELEVATION (x) TO (x). (if necessary), EXCAVATE THIS LAYER (TO A MAXIMUM DEPTH OF (x') BELOW THE BOTTOM OF FOOTING ELEVATION) UNTIL SUITABLE BEARING MATERIAL IS REACHED, AS DIRECTED BY THE ENGINEER. EXCAVATION TO ELEVATION (x) IS INCLUDED IN THE QUANTITY FOR STRUCTURAL EXCAVATION. BACKFILL EXCAVATION BELOW THE FOOTING ELEVATION WITH (specify borrow type, stone and/or crushed concrete or a combination) ON GEOTEXTILE. PAYMENT UNDER (respective items).

2. ROCK PROFILE VARIATION: (see designer note 5)  
IT IS ANTICIPATED THAT THE ACTUAL PROFILE OF THE ROCK VARIES FROM WHAT HAS BEEN MEASURED, THE ESTIMATED QUANTITIES FOR THE ITEMS LISTED BELOW HAVE BEEN INCREASED xx% OVER THE QUANTITIES CALCULATED:  
- (insert item numbers and descriptions)

3. BLAST MONITORING: (see designer note 6)  
MONITOR BOTH THE EXISTING STRUCTURE AND THE PROPOSED STRUCTURE DURING ANY BLASTING TO ENSURE STRUCTURAL STABILITY THROUGHOUT THE DURATION OF THE PROJECT. THE MAXIMUM PERMISSIBLE LEVEL FOR PEAK PARTICLE VELOCITY (PPV) IS (insert appropriate value) IN/SEC. PAYMENT UNDER ITEM # (207010 or 207011) - ROCK EXCAVATION FOR STRUCTURES.
4. EMBANKMENTS:  
ALLOW BRIDGE EMBANKMENTS TO SIT UNDISTURBED FOR A MINIMUM (insert number of days)-DAY PERIOD AFTER PLACED TO THE BOTTOM OF ABUTMENT FOOTER ELEVATION, OR AS DIRECTED BY THE ENGINEER. WHEN SETTLEMENT DOES NOT EXCEED (insert value in inches) PER WEEK, RESUME WORK ON THE EMBANKMENT, OR AS DIRECTED BY THE ENGINEER.

5. REMOVAL OF STRUCTURES AND OBSTRUCTIONS:  
REMOVE THE FOLLOWING ITEMS UNDER ITEM #211000 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS ASSOCIATED WITH BRIDGE (insert bridge number):  
- (insert list of items to be removed under #211000)

6. HAZARDOUS MATERIAL (existing or previous timber only - see designer note 7):  
BE ADVISED THAT THE (existing or previous) STRUCTURE OVER (insert road or stream name) MAY CONTAIN CREOSOTED TIMBER. HANDLE ALL HAZARDOUS MATERIALS (i.e. creosote timber) IN ACCORDANCE WITH SPECIAL PROVISION 202560. PAYMENT INCIDENTAL TO ITEM #211000 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.

7. HAZARDOUS MATERIAL (steel only):  
BE ADVISED THAT THE EXISTING STRUCTURE OVER (insert road or stream name) DOES CONTAIN LEAD BASED PAINT. AS A RESULT, DETAIL METHODS OF CUTTING THE BEAMS AND/OR DIAPHRAGMS, IF REQUIRED, IN THE CONTRACTOR'S PROPOSED DEMOLITION PLAN AND HOW THOSE PERSONS PERFORMING SUCH WORK WILL BE PROTECTED IN ACCORDANCE WITH APPLICABLE OSHA REGULATIONS. ADDITIONALLY, DETAIL WHEN AND HOW THE LEAD BASED PAINT WILL BE REMOVED FROM THE STRUCTURAL STEEL AND ALL RELATED BRIDGE COMPONENTS. IF THE WORK IS PERFORMED ON SITE, THEN INCLUDE PROPER PROTECTION, CONTAINMENT, AND FINAL LEAD PAINT DISPOSAL IN THE PROPOSED PLAN. IF THE BEAMS WILL BE TRANSPORTED WITH THE PAINT STILL INTACT, THEN DETAIL HOW THE STRUCTURAL COMPONENTS WILL BE PROTECTED DURING TRANSPORT, WHERE AND HOW THE PAINT WILL BE REMOVED, AND THE LOCATION OF FINAL PAINT DISPOSAL, AGAIN IN ACCORDANCE WITH OSHA REGULATIONS. PROVIDE WRITTEN DOCUMENTATION TO THE ENGINEER, PRIOR TO FINAL CONTRACT ACCEPTANCE, NOTING WHEN AND WHERE THE LEAD BASED PAINT WAS REMOVED, AND THE LOCATION OF FINAL PAINT DISPOSAL. ALL COSTS INVOLVED WITH THE ABOVE LISTED WORK IS INCIDENTAL TO ITEM #211000 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.

8. SIGNING:  
TO AVOID DAMAGE, SIGNS WITHIN PROJECT LIMITS MAY BE REMOVED DURING CONSTRUCTION IF NEEDED, BUT MUST BE REPLACED TO MATCH EXISTING CONDITIONS BEFORE REOPENING THE ROADWAY. INCLUDE PAYMENT FOR ALL WORK RELATED TO MOVING AND REINSTALLING THE SIGN IN ITEM #211000 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS. IF THE SIGN IS DAMAGED DURING CONSTRUCTION, REPLACE THE SIGN AT THE CONTRACTOR'S EXPENSE.

SECTION 600

9. PORTLAND CEMENT CONCRETE:  
USE PORTLAND CEMENT CONCRETE FOR CAST-IN-PLACE ELEMENTS AS FOLLOWS:  
(f'c = 28-DAY COMPRESSIVE STRENGTH)  
CLASS A - (insert list of structural components utilizing Class A concrete), (f'c = 4.5 ksi)  
CLASS B - (insert list of structural components utilizing Class B concrete), (f'c = 3.0 ksi)  
CLASS C - (insert list of structural components utilizing Class C concrete), (f'c = 2.0 ksi)  
CLASS D - (insert list of structural components utilizing Class D concrete), (f'c = 4.5 ksi)  
  
(cast-in-place concrete only) SUPPLY THE CONCRETE FOR THE BRIDGE DECK, APPROACH SLAB, AND PARAPETS THAT INCLUDES A SHRINKAGE-REDUCING/COMPENSATING ADMIXTURE. THE ADMIXTURE MAY BE SUPPLIED BY ONE PRODUCT THAT PROVIDES BOTH EXPANSION AND PORE WATER SURFACE TENSION OR TWO SEPARATE PRODUCTS EACH ADDED AT DOSAGE RECOMMENDED BY MANUFACTURER'S TECHNICAL DATA SHEETS AND HAVING THE FOLLOWING CHARACTERISTICS:  
(a.) DESIGNED TO PROVIDE BOTH OF THE FOLLOWING CHARACTERISTICS:  
(i.) EXPANDS AT A RATE THAT CLOSELY COMPENSATES FOR THE SHRINKAGE OF THE CONCRETE MIX.  
(ii.) REDUCES THE CAPILLARY SURFACE TENSION OF THE CONCRETE PORE WATER.  
(b.) PROVIDES AT LEAST 80% SHRINKAGE REDUCTION AS MEASURED AND DOCUMENTED BY FIELD PERFORMANCE.  
(c.) FORMULATED FOR USE IN FREEZING AND THAWING WEATHER.  
USE ADMIXTURES THAT ARE COMPATIBLE WITH ALL OTHER CONCRETE-MIX DESIGN CONSTITUENTS. CALCIUM CHLORIDE IS NOT PERMITTED; NO CHEMICAL ADMIXTURES WHICH CONTAIN MORE THAN 0.1% CHLORIDE BY WEIGHT, WILL BE PERMITTED FOR USE. DOSAGE RATE AND MIXING SEQUENCE WILL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

(see designer note 8) SLIP-FORMING OF PARAPETS IS (NOT ALLOWED or ALLOWED). (if allowed, add reference to special provisions from the designer note.)

SECTION 600 (CONTINUED)

9. PORTLAND CEMENT CONCRETE (CONTINUED):  
USE PORTLAND CEMENT CONCRETE FOR PRECAST ELEMENTS AS FOLLOWS:  
(f'c = 28-DAY COMPRESSIVE STRENGTH)  
(f'ci = COMPRESSIVE STRENGTH AT INITIAL PRESTRESS)  
(insert list of precast structural components):  
f'c = (insert f'c value) ksi; f'ci = (insert f'ci value) ksi  
-DESIGN ASSUMPTIONS: THE PRESTRESSED CONCRETE BEAMS WERE DESIGNED FOR (MODERATE or SEVERE CORROSIVE CONDITIONS) AS PER A5.9.2.3.2b.  
(when using draped strands) THE HOLD DOWN FORCE DUE TO DRAPED STRANDS IS xx KIPS. (if the force exceeds 20 kips)  
  
(for use with cast-in-place or precast concrete) THE (describe elements) ARE DESIGNATED AS MASS CONCRETE POURS. A TEMPERATURE CONTROL PLAN IS REQUIRED FOR THESE ELEMENTS. REFER TO SECTIONS 610.3.1.A.2 AND 610.3.4.D.3 OF THE STANDARD SPECIFICATIONS FOR MORE INFORMATION.  
  
(if using lightweight concrete) USE LIGHTWEIGHT CONCRETE WITH A UNIT WEIGHT OF xxx PCF. (describe any additional material properties as necessary)

10. DECK SLAB:  
THE DECK SLAB THICKNESS INCLUDES ½" INTEGRAL WEARING SURFACE.

11. PARAPET FORM LINERS  
PROVIDE A (BRICK or STONE or AESTHETIC) PARAPET FORM LINER PATTERN. (PAINT or STAIN) THE FORM-LINED SURFACE. THE COLOR(s) WILL BE (insert color) CONFORMING TO (FEDERAL COLOR #xxxxx or other standard).  
-if using multiple colors describe which is used where  
-if requiring a sample panel (see Section 604.3.3.C of Standard Specifications) include - PRIOR TO CONSTRUCTING PARAPETS, CONSTRUCT A x' BY x' SAMPLE PANEL FOR APPROVAL.

12. BAR REINFORCEMENT:  
-PROVIDE REINFORCING STEEL CONFORMING TO AASHTO M31 (ASTM A615), GRADE 60.  
-PROVIDE A 3" CLEAR COVER FOR ALL REINFORCING STEEL PLACED IN CONCRETE CAST AGAINST EARTH OR A 2" CLEAR COVER ELSEWHERE, UNLESS OTHERWISE SPECIFIED ON THE PLANS.  
-WHERE A SUFFIX IS INCLUDED IN BAR MARKS, PROTECT ALL REINFORCING STEEL WITH THE MATERIAL DENOTED.  
SUFFIX 'E' DENOTES EPOXY COATED BAR REINFORCEMENT  
SUFFIX 'G' DENOTES GALVANIZED BAR REINFORCEMENT  
SUFFIX 'S' DENOTES STAINLESS STEEL BAR REINFORCEMENT  
  
-WITH APPROVAL OF THE BRIDGE DESIGN ENGINEER, GALVANIZED REINFORCING STEEL MAY BE SUBSTITUTED FOR EPOXY-COATED REINFORCING STEEL AT NO ADDITIONAL COST TO THE DEPARTMENT.

13. PRECAST BEAMS AND PIER DIAPHRAGMS (typical for multi-span precast prestressed concrete beams):  
DO NOT POUR PIER DIAPHRAGMS WITHIN 90 DAYS AFTER THE CASTING OF THE BEAMS. IF THIS TIME FRAME IS NOT SUFFICIENT, SUBMIT FOR APPROVAL A DESIGN SHOWING STRUCTURAL CALCULATIONS TO ACCOUNT FOR RESTRAINT MOMENTS.

14. INTERMEDIATE DIAPHRAGMS (typical for precast prestressed concrete beams):  
THE PRECASTER AND/OR THE CONTRACTOR MAY USE A PRECAST CONCRETE OR GALVANIZED STEEL ALTERNATE FOR THE INTERMEDIATE DIAPHRAGMS. IF THIS OPTION IS CHOSEN, INCLUDE NEW CONNECTION DETAILS IN THE PRECAST PRESTRESSED BEAM WORKING DRAWINGS FOR APPROVAL.

15. END AND PIER DIAPHRAGMS (typical for precast prestressed concrete beams):  
END DIAPHRAGMS AND PIER DIAPHRAGMS FOR (insert pier numbers) CANNOT BE POURED UNTIL DECK POUR (insert deck pour sequence number) IS COMPLETED.

16. CONCRETE SEALER:  
REFER TO DIAGRAMS CONTAINING CONCRETE SEALER LIMITS ON SHEET(s) (insert sheet number(s)). PAYMENT UNDER (insert appropriate item number). (if necessary, insert appropriate notes describing limits of protective coating if such details are difficult to outline on the plans.)

17. ABUTMENT PROTECTION:  
APPLY (insert relevant protection information) FOR ABUTMENT PROTECTION. APPLY PROTECTION (insert dimension) FROM THE FACE OF EACH ABUTMENT or MSE WALL AND TERMINATE IN A 2'-0" DEEP TOE.

18. STRUCTURAL STEEL: (see designer note 9)  
PROVIDE STRUCTURAL STEEL CONFORMING TO AASHTO M270, GRADE 50 or 50W (ASTM A709, GRADE 50 or 50W) DESIGNATION, EXCEPT WHEN NOTED OTHERWISE. THE ADDITIONAL REQUIREMENTS FOR CHARPY V-NOTCH TESTING OF AASHTO M270 ARE MANDATORY FOR PRIMARY LOAD CARRYING MEMBERS. USE TESTING PARAMETERS FOR TEMPERATURE ZONE 2. MEMBERS REQUIRING CHARPY V-NOTCH TESTING (DENOTED AS 'CVN' ON PLANS) INCLUDE:  
-TOP AND BOTTOM GIRDER FLANGES  
-GIRDER WEB PLATES  
-GIRDER FIELD SPLICE PLATES (remove note if not applicable)  
-DIAPHRAGM MEMBERS AND DIAPHRAGM CONNECTION PLATES (only if considered a primary member such as in curved or highly skewed bridges)  
  
ALL FASTENERS ARE 7⁄8" DIAMETER (7⁄8" is standard diameter. Edit if design requires another diameter.) ASTM F3125 HIGH STRENGTH BOLTS, TYPE 1 GRADE Axxx (A325 for medium carbon steel or A490 for alloy steel - corresponding to former stand-alone ASTM specifications) or TYPE 3 (weathering steel), UNLESS OTHERWISE NOTED.  
  
(see designer note 10) REAM SUBDRILLED or SUBPUNCHED HOLES FOR FIELD SPLICES IN THE FABRICATION SHOP.

SECTION 600 (CONTINUED)

18. STRUCTURAL STEEL (CONTINUED):  
(for straight girders only - see designer note 11) USE OVERSIZED HOLES ON DIAPHRAGM CONNECTORS. ALL BOLTS ON DIAPHRAGMS MUST BE FINGER TIGHT AT ERECTION. BOLTS ARE TO BE TORQUED BEFORE CONCRETE DECK IS POURED. (insert additional language on bolt tightening sequence for phased constructions).  
  
THE FAYING SURFACE CLASSIFICATION IS (insert class x surface conditions). (see Section 106.8.6, A6.13.2.8 and Section 616.3 of Standard Specifications for more information)  
  
STRUCTURAL MEMBERS LABELED WITH 'FCN' DENOTES FRACTURE CRITICIAL MEMBERS. (see Section 106.8.2.1 for more information)  
  
(Note that Section 604.3.2.A.3 of Standard Specifications says not to weld formwork unless specified in the contract. If allowing threaded studs (a possible exception), then include this note) THREADED STUDS FOR THE SUPPORT OF THE DECK OVERHANG FORMING BRACKET ARE PERMITTED PROVIDED THE THREADED STUD IS ATTACHED WITH THE SAME WELDING PROCESSING AS THE SHEAR STUDS.  
  
Welding sub-notes (these are items not addressed in the Standard Specifications)  
-MAKE TACK WELDS WITH THE SAME TYPE OF ELECTRODE AND INCORPORATE IN THE FINAL WELD. NO OTHER TACK WELDING WILL BE PERMITTED.  
-OVERHEAD WELDING IS NOT PERMITTED IN THE FIELD UNLESS OTHERWISE SPECIFIED ON THE PLANS.  
-DO NOT MAKE WELDS BY MANUAL SHIELDED METAL ARC PROCESS FOR PRIMARY GIRDER WELDS SUCH AS FLANGE TO WEB WELDS OR FOR SHOP SPLICES OF WEB AND FLANGES.  
  
(see designer note 12) SHOP ASSEMBLE THE ENTIRE STEEL SUPERSTRUCTURE FOLLOWING THE SAME ERECTION PROCEDURES AND SUPPORT CONDITIONS TO ENSURE THE PROPER FIT FOR ALL STRUCTURAL STEEL COMPONENTS PRIOR TO REAMING OF BOLT HOLES FOR SPLICES AND DIAPHRAGM CONNECTION PLATES.  
  
(typical for curved or skewed girders) ERECT GIRDER WEBS IN THE (insert appropriate condition) CONDITION. (as described in Section 106.8.9.1.3)  
  
SET ANCHOR BOLTS TO TEMPLATE OR IN PRE-FORMED HOLES. DO NOT DRILL UNLESS SPECIFICALLY INDICATED ON PLANS. FILL THE PRE-FORMED HOLES WITH NON-SHRINK GROUT. IN MASONRY PLATES, FILL THE CLEARANCE BETWEEN ANCHOR BOLTS AND HOLES WITH APPROVED NON-HARDENING CAULKING COMPOUND.

19. PERFORATED PIPE UNDERDRAINS:  
MINIMUM INSTALLATION SLOPE SHALL BE 0.02 FT./FT. CAP FREE ENDS.

20. (for precast culverts, rigid frames and retaining walls) THE FACTORED BEARING RESISTANCE OF SOIL BENEATH PRECAST ELEMENTS IS x.xx ksf.

SECTION 800

21. MAINTENANCE OF TRAFFIC:  
(for use with full road closures) MAINTAIN TRAFFIC AS PER DETOUR PLAN. ALL MOT ITEMS, WITH THE EXCEPTION OF PORTABLE CHANGEABLE MESSAGE SIGNS (ITEM 803001) AND FLAGGERS (insert appropriate item numbers), WILL BE INCLUDED IN ITEM #801500 - MAINTENANCE OF TRAFFIC, ALL INCLUSIVE.

22. TEMPORARY MOUNTED BARRIERS:  
SUBMIT FOR APPROVAL A WORKING DRAWING DETAILING THE PROPOSED MEANS AND METHODS TO ANCHOR THE PORTABLE PCC STRUCTURE MOUNTED BARRIER (DESIGNED FOR TL-(insert value) IMPACT LOADING) AND TO REPAIR THE BOLT HOLES IN THE DECK. ADJUST THE LOCATION OF ANCHORS TO AVOID CONFLICT WITH BAR REINFORCEMENT IN THE DECK. PAYMENT INCIDENTAL TO ITEM # (insert item number and description).

SECTION 900

23. USE OF WELL POINTS: (see designer note 13)  
SOIL BORINGS HAVE IDENTIFIED POTENTIAL ISSUES WITH A HIGH WATER TABLE (and/or) RUNNING SANDS, DESCRIBED AS (insert description) AT ELEVATION (x). IF NEEDED AND WITH APPROVAL OF THE ENGINEER, INSTALL A WELL POINT SYSTEM TO LOWER THE GROUNDWATER ELEVATION. PAYMENT UNDER ITEM #906005 - WELL POINT SYSTEM.

MISCELLANEOUS

24. DESIGN SPECIFICATIONS:  
(A) DELDOT BRIDGE DESIGN MANUAL, 2021 EDITION  
(B) AASHTO LRFD BRIDGE SPECIFICATIONS, 2017, 8TH EDITION, CUSTOMARY U.S. UNITS.  
(C) PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH THE DELDOT STANDARD SPECIFICATIONS, AUGUST 2020.



MISCELLANEOUS (CONTINUED)

25. **LOADING:** (see designer note 14)  
-DEAD LOADS INCLUDE 25 PSF FOR FUTURE WEARING SURFACE ON DECK SLAB AND 15 PSF FOR STAY-IN-PLACE FORMS (INCLUDES CONCRETE IN FORM CORRUGATIONS). (the designer should also include barrier or fence loads with percentage of load applied to exterior and first interior beam).  
-DESIGN LIVE LOADS INCLUDE HL-93 LOADING.  
-FATIGUE DESIGN IS BASED ON THE FOLLOWING ONE DIRECTIONAL TRAFFIC VOLUMES: ADTT = (insert value and year).  
-LIVE LOAD DISTRIBUTION TO THE GIRDERS IS BASED ON THE AASHTO SIMPLIFIED METHOD or THE GRILLAGE METHOD (when using refined analysis).  
-(for steel girders) LIVE LOAD DISTRIBUTION FACTOR IS *x.xx*. (provide a table if necessary for multiple spans or bridges - see Section 106.8.8)  
-THERMAL LOADS AND MOVEMENTS ARE BASED ON THE MODERATE TEMPERATURE RANGE AS STIPULATED IN THE AASHTO LRFD DESIGN SPECIFICATIONS AS (insert temperature range specified for each material type in A3.12) . THE NORMAL TEMPERATURE WILL BE CONSIDERED TO BE 68° F.  
-LIVE LOAD DEFLECTION LIMIT IS *L/((insert value))*.  
-FOR SEISMIC LOADS, CONSIDER SEISMIC PERFORMANCE ZONE 1, WITH A SITE CLASS = (insert A, B, C, D, E, or F) AND OPERATIONAL CATEGORY = (insert CRITICAL, ESSENTIAL, or OTHER).  
-(for standard form support systems only in accordance with requirements specified in Figure 106-1) THE FASCIA GIRDERS ARE DESIGNED FOR A TEMPORARY CONSTRUCTION LOAD APPLIED TO THE WEB WITHIN 6" OF THE BOTTOM FLANGE AT APPROXIMATELY 4'-0" INTERVALS. THIS LOAD APPROXIMATES THE HORIZONTAL COMPONENT OF A DECK SLAB OVERHANG FORM SUPPORT BRACKET AND CONSISTS OF A (insert value) kip/ft ALLOWANCE FOR THE WEIGHT OF THE CONCRETE, FORMS, AND DECK FINISHING MACHINE.  
-FOR REINFORCEMENT DISTRIBUTION REQUIREMENTS, CONSIDER CLASS 1 or 2 EXPOSURE CRITERIA FOR DECKS.  
-BARRIERS HAVE BEEN DESIGNED FOR MASH TEST LEVEL (insert test level value) (TL-X).

26. **EXISTING CONDITIONS** (sample notes for use on rehabilitation projects, use and/or revise to make project specific as appropriate. Also see designer note 15):  
-ALL EXISTING DIMENSIONS AND ELEVATIONS SHOWN ARE BASED ON THE BEST AVAILABLE INFORMATION AND ARE APPROXIMATE ONLY. FIELD VERIFY ALL EXISTING DIMENSIONS, GEOMETRY, AND ELEVATIONS AS NECESSARY PRIOR TO ORDERING ANY MATERIALS AND COMMENCING CONSTRUCTION TO ENSURE PROPER FIT OF THE PROPOSED CONSTRUCTION. PAYMENT UNDER ITEM #763501 - CONSTRUCTION ENGINEERING.  
-DO NOT CONSIDER ANY OF THE DATA ON THE EXISTING STRUCTURE SUPPLIED IN THE ORIGINAL DESIGN DRAWINGS OR MADE AVAILABLE BY THE DEPARTMENT OR ITS AUTHORIZED AGENTS AS ACCURATE REPRESENTATIONS OF ANY OF THE CONDITIONS THAT WILL BE ENCOUNTERED IN THE FIELD.

27. **CONTINGENT QUANTITIES:** (see designer note 15)  
THESE CONTRACT DRAWINGS HAVE BEEN PREPARED BASED ON ORIGINAL CONTRACT PLANS AND FIELD INSPECTION NOTES. ACTUAL CONDITIONS MAY REQUIRE MODIFICATION IN CONSTRUCTION DETAILS AND REQUIRED QUANTITIES. THE ESTIMATED QUANTITIES FOR THE FOLLOWING PAY ITEMS INCLUDE CONTINGENCY FACTORS TO ACCOUNT FOR THE ANTICIPATED VARIATIONS IN THE ACTUAL QUANTITY.  
- (insert item numbers, descriptions, and percent of contingency estimated)

28. **HYDRAULIC DATA:**  
DRAINAGE AREA: *xxx sq. miles* DESIGN FREQ.: (insert design storm year) YEARS  
DESIGN DISCHARGE: *xxxx cfs* 100-YEAR DISCHARGE: *xxxx cfs*  
EXISTING (DESIGN STORM) WSE: *xx.xx ft* PROPOSED (DESIGN STORM) WSE: *xx.xx ft*  
EXISTING (DESIGN STORM) VELOCITY: *xx.xx fps* PROPOSED (DESIGN STORM) VELOCITY: *xx.xx fps*  
EXISTING 100-YEAR WSE: *xx.xx ft* PROPOSED 100-YEAR WSE: *xx.xx ft*  
EXISTING 100-YEAR VELOCITY: *xx.xx fps* PROPOSED 100-YEAR VELOCITY: *xx.xx fps*  
EXISTING WATERWAY OPENING: *xxx sq. ft* PROPOSED WATERWAY OPENING: *xxx sq. ft*

note for tidal areas the following additional information is required:  
MEAN HIGH WATER ELEVATION: *xx ft*  
MEAN LOW WATER ELEVATION: *xx ft*  
VERTICAL UNDER CLEARANCE: *xx ft*

29. **SCOUR ANALYSIS:**  
SCOUR DESIGN FREQUENCY: *xxx YEARS* or OVERTOPPING (as per guidance of Section 104.4 - 'scour evaluation and protection' and Figure 104-8)  
SCOUR DESIGN FLOOD DISCHARGE: *xxx cfs*  
SCOUR DESIGN FLOOD VELOCITY: *xx fps* (AT BRIDGE OUTLET)  
WATER SURFACE ELEVATION: *xx ft* (IMMEDIATELY UPSTREAM OF BRIDGE)  
CALCULATED SCOUR DEPTH AT EACH SUBSTRUCTURE UNIT: *xx ft* (list all units)

SCOUR COUNTERMEASURES HAVE BEEN DESIGNED FOR THE SCOUR DESIGN FLOOD IN ACCORDANCE WITH HEC 23 - BRIDGE SCOUR AND STREAM INSTABILITY COUNTERMEASURES and/or HEC 14 - HYDRAULIC DESIGN OF ENERGY DISSIPATORS FOR CULVERTS AND CHANNELS (as appropriate).

30. **ROADWAY CLEARANCES:** (see Section 103.3.5)  
MAINTAIN A MINIMUM OF (insert value) ABOVE ALL ROADWAYS.

31. **UTILITIES:** (include note on projects with complex utility issues)  
SEE UTILITY STATEMENT AND UTILITY RELOCATION PLAN SHEETS FOR FURTHER INFORMATION ON UTILITY COORDINATION.  
(add project specific notes to describe unusual and complex utility issues such as possible construction conflicts, unknown conditions due to limited information, coordination with construction phasing, etc.)

DESIGNER NOTES

1. THE 'BRIDGE PROJECT NOTES' CONTAINS A GROUP OF TYPICAL NOTES USED IN DELDOT PROJECTS, AND IS ORGANIZED INTO DELDOT STANDARD SPECIFICATIONS SECTIONS. THE DESIGNER SHOULD USE ONLY APPLICABLE NOTES, AS SHOWN ON BOTH SHEETS, AND MODIFY THE NOTES AS NECESSARY TO MAKE THEM PROJECT-SPECIFIC. WHERE THERE ARE SUB-NOTES, USE APPLICABLE SUB-NOTES (SUB-NOTE FORMAT MAY BE RETAINED OR SUB-NOTES MAY BE USED AS STAND ALONE NOTES). FURTHERMORE, IT IS THE DESIGNER'S RESPONSIBILITY TO ENSURE ALL APPROPRIATE PROJECT NOTES ARE INCLUDED IN THE PLAN SET, WHICH ALSO INCLUDE ANY PROJECT SPECIFIC NOTES NOT LISTED UNDER DETAIL NO. 301.01.
2. FOR BRIDGES UNDER THEIR OWN CONTRACTS, MICROSTATION CELLS AND .DGN FILES FOR THE PROJECT NOTES SHEET ALONG WITH GENERAL AND TYPICAL PROJECT NOTES CAN BE FOUND IN THE DELDOT DESIGN RESOURCE CENTER. THE GENERAL AND TYPICAL PROJECT NOTES AS FOUND ON THE DESIGN RESOURCE CENTER SHOULD BE USED AS APPROPRIATE ALONG WITH PROJECT-SPECIFIC TYPICAL BRIDGE NOTES.
3. THE 'QUANTITIES' TABLE IS ONLY REQUIRED FOR PROJECTS WHERE BRIDGES ARE PART OF A LARGER PROJECT. QUANTITIES ARE TYPICALLY INCLUDED WITH BRIDGE PROJECT NOTES.
4. THE 'LOAD RATING SUMMARY' TABLE IS REQUIRED TO BE SHOWN ON ALL BRIDGE PROJECT PLAN SETS. LOAD RATING SUMMARY IS TYPICALLY INCLUDED WITH BRIDGE PROJECT NOTES. IN MOST CASES, (SEE SECTION 108.5) INFORMATION FOR THE TABLE IS PROVIDED BY DELDOT'S BRIDGE MANAGEMENT SECTION AFTER THE SEMI-FINAL CONSTRUCTION PLAN SUBMITTAL.
5. UNDER 'BRIDGE PROJECT NOTES' NOTE 2, THIS NOTE IS TYPICALLY NECESSARY FOR PROJECTS WHERE INFORMATION ON ROCK PROFILE VARIATION IS LIMITED, THUS REQUIRING AN ADDITIONAL CONTINGENCY OF AT LEAST 25% FOR THE QUANTITY OF SEVERAL ITEMS.
6. UNDER 'BRIDGE PROJECT NOTES' NOTE 3, REFER TO SECTION 210.5.2.2 FOR MORE INFORMATION ON DETERMINING THE APPROPRIATE PROJECT-SPECIFIC MAXIMUM PERMISSIBLE LEVEL FOR PEAK PARTICLE VELOCITY (PPV).
7. UNDER 'BRIDGE PROJECT NOTES' NOTE 6, MANY EXISTING PIPE, CULVERT AND RIGID FRAME STRUCTURES WERE PRECEDEED TO A TIMBER STRUCTURE. OFTEN TIMBER ELEMENTS REMAIN EITHER BELOW OR OUTSIDE OF THE FOOTPRINT OF THE BRIDGE. INCLUDE THIS NOTE AS A CONTINGENCY.
8. UNDER 'BRIDGE PROJECT NOTES' NOTE 9, SLIP-FORMING OF BARRIERS IS NOT ALLOWED AS PER SECTION 610.3.4.D.4 OF STANDARD SPECIFICATIONS UNLESS IT IS SPECIFICALLY ALLOWED IN THE CONTRACT. IF SLIP-FORMING IS USED, FOLLOW THE SPECIAL PROVISIONS OF ITEM 610510.
9. UNDER 'BRIDGE PROJECT NOTES' NOTE 18, THE DESIGNER SHOULD TAKE CARE TO INCLUDE ONLY RELEVANT AND PROJECT SPECIFIC NOTES FOR STEEL MEMBERS USED IN THE PROJECT. SOME OF THE NOTES APPLY ONLY TO CURVED GIRDERS OR MULTI-SPAN STRUCTURES, AND THESE NOTES SHOULD BE REMOVED IF THE PROJECT ONLY INCLUDES STRAIGHT GIRDERS OR SIMPLE SPAN STRUCTURES.

10. Reserved for future use.

11. Reserved for future use.

12. Reserved for future use.

13. UNDER 'BRIDGE PROJECT NOTES' NOTE 23, REFER TO SECTION 210.4.7D FOR MORE INFORMATION ON RUNNING SANDS.

14. UNDER 'BRIDGE PROJECT NOTES' NOTE 25, THE INFORMATION ON SITE CLASSES CAN BE FOUND IN TABLE A3.10.3.1-1. INFORMATION ON OPERATIONAL CATEGORY CAN BE FOUND IN A3.10.5, A3.10.7 AND SECTION 203.10.5. THE INFORMATION ON CLASS EXPOSURE CRITERIA CAN BE FOUND IN A5.6.7.

15. UNDER 'BRIDGE PROJECT NOTES' NOTE 26 OR 27, THESE NOTES ARE TYPICALLY NECESSARY FOR PROJECTS WHERE INFORMATION ON CERTAIN EXISTING CONDITIONS (REHABILITATION PROJECTS OR GEOTECHNICAL INFORMATION FOR INSTANCE) ARE LIMITED, THUS REQUIRING AN ADDITIONAL CONTINGENCY OF AT LEAST 25% FOR SEVERAL ITEM NUMBERS. IF USING BOTH NOTES 26 AND 27, EDIT TO BE PROJECT SPECIFIC AND AVOID CONFLICTS BETWEEN NOTES.

16. THE DESIGNER SHOULD PLACE THE FOLLOWING STANDARD NOTE ON EACH OF THE EXISTING BRIDGE PLANS WHICH ARE TO BE SUPPLIED TO PROSPECTIVE BIDDERS: 'BIDDERS ARE ADVISED TO FIELD VERIFY INFORMATION PRESENTED. THE DATA SHOWN HEREIN IS NOT PART OF THE PLANS, PROPOSAL, OR CONTRACT, AND IS NOT TO BE CONSIDERED AS A BASIS FOR COMPUTATION FOR ANY PURPOSE'.

LOAD RATING SUMMARY

DESIGN VEHICLE	RATING FACTOR	RATING WEIGHT (TON)	CONTROLLING MEMBER	CONTROLLING POINT	LOAD EFFECT
HL-93 TRUCK+LANE (INVENTORY)	X.XX	XX.XX	XXXXXXXXXXXXXXXX	XXX	XXXXXXXX
HL-93 TANDEM+LANE (INVENTORY)	X.XX	XX.XX	XXXXXXXXXXXXXXXX	XXX	XXXXXXXX
HS-20 (INVENTORY)	X.XX	XX.XX	XXXXXXXXXXXXXXXX	XXX	XXXXXXXX
HL-93 TRUCK+LANE (OPERATING)	X.XX	XX.XX	XXXXXXXXXXXXXXXX	XXX	XXXXXXXX
HL-93 TANDEM+LANE (INVENTORY)	X.XX	XX.XX	XXXXXXXXXXXXXXXX	XXX	XXXXXXXX
HS-20 (OPERATING)	X.XX	XX.XX	XXXXXXXXXXXXXXXX	XXX	XXXXXXXX
DE 5220 & LEGAL-LANE (LEGAL)	X.XX	XX.XX	XXXXXXXXXXXXXXXX	XXX	XXXXXXXX
DE 5335 & LEGAL-LANE (LEGAL)	X.XX	XX.XX	XXXXXXXXXXXXXXXX	XXX	XXXXXXXX
DE 5437 & LEGAL-LANE (LEGAL)	X.XX	XX.XX	XXXXXXXXXXXXXXXX	XXX	XXXXXXXX
DE T330 & LEGAL-LANE (LEGAL)	X.XX	XX.XX	XXXXXXXXXXXXXXXX	XXX	XXXXXXXX
DE T435 & LEGAL-LANE (LEGAL)	X.XX	XX.XX	XXXXXXXXXXXXXXXX	XXX	XXXXXXXX
DE T540 & LEGAL-LANE (LEGAL)	X.XX	XX.XX	XXXXXXXXXXXXXXXX	XXX	XXXXXXXX
EV2 (EMERGENCY VEHICLE)	X.XX	XX.XX	XXXXXXXXXXXXXXXX	XXX	XXXXXXXX
EV3 (EMERGENCY VEHICLE)	X.XX	XX.XX	XXXXXXXXXXXXXXXX	XXX	XXXXXXXX
SU4 (LEGAL)	X.XX	XX.XX	XXXXXXXXXXXXXXXX	XXX	XXXXXXXX
SU5 (LEGAL)	X.XX	XX.XX	XXXXXXXXXXXXXXXX	XXX	XXXXXXXX
SU6 (LEGAL)	X.XX	XX.XX	XXXXXXXXXXXXXXXX	XXX	XXXXXXXX
SU7 (LEGAL)	X.XX	XX.XX	XXXXXXXXXXXXXXXX	XXX	XXXXXXXX

NOTE: LOAD RATING INCLUDES FUTURE WEARING SURFACE AS NOTED IN THE PLANS.

note: for astm c1577 precast concrete box culverts, include additional information for the load rater such as design earth cover, reinforcement areas, culvert opening, design ef fective width, etc.

